Building an Infrastructure to Support Forest Health Activities and Produce Renewable Electric Power

By William H. Carlson

The utilization of energy resources on federal lands is a topic of great interest to the USA Biomass Power Producers Alliance (USABPPA) given our long relationship with biomass from federal forest lands and our knowledge of the condition of the federal forests. USABPPA is an organization of those companies producing power for the grid from biomass resources, and represents the majority of such power in the US. We will explain why a dramatic expansion of biomass energy from thinning of federal forests is in the interest of national energy security, economic well being, and the health and preservation of those very forests. Typically, any decision to increase extraction of energy, particularly from public lands involves environmental tradeoffs. In the case I will present today, that thesis is turned on its head, and the extraction of energy provides dramatic environmental and economic benefits. The inclusion in an energy bill of a redefined and reauthorized biomass tax credit and a fuel transportation subsidy are the catalysts to set such a program in motion.

The President, in his State of the Union address, expressed as a national priority the thinning of our nearly 190 million acres of unhealthy, overstocked, at risk public forests. Likewise, the expansion of our secure domestic sources of energy is as important nationally to the President. The marriage of these two concepts in a way that also nets a savings of tens of billions of dollars for the Treasury is possible, and this Congress, through a comprehensive energy bill, can put in place the remaining elements to allow this to proceed. Far from being an unproven concept, this system of thinning with energy/product production has been demonstrated over 15 years on over one million acres of public and private forests in Northern California and the results are nothing short of spectacular. Catastrophic wildfires are stopped in their tracks, wildlife habitat is enhanced, watersheds saved and rehabilitated, smoky air reduced, rural economies are strengthened, and forest lands are returned to health typically at no cost, all while protecting the largest and best of the forest.

The network of small log mills/other value added manufacturing and biomass power plants that is necessary to support cost effective large scale thinning projects, and that exists only in Northern California, was due to a unique set of circumstances not present elsewhere in the West. The trick, that we will discuss today, is how to maintain existing facilities that can assist in this effort while duplicating this infrastructure throughout the western forests using private investment, and we will explain how a comprehensive energy bill can go a long ways towards accomplishing that end.

Before investing in the creation of this infrastructure, investors; be they individuals, communities or corporations, will need to affirmatively answer three key questions:

One, is there an assurance that the raw material will be available in the necessary quantities for the period of time required to recover the capital;

Two, is there a proven technology that will eliminate risk, both in the energy/product conversion as well as in the resource procurement; and

Three, is there a set of project economics that will support the investment of this capital with a fair return and relatively low risk?

If these three questions can be answered affirmatively throughout the West, and based on our California experience, we could see an investment of $30-50 billion of private capital supporting the thinning of perhaps 5 million acres per year, saving the Treasury $4 billion per year in thinning cost and $80 billion over 2 decades, while producing perhaps 10,000 mw of secure domestic renewable energy.

Fortuitously, the first criteria, assurance of long term raw material supply, was largely solved by the recent establishment of long term stewardship contracting authority for both the U.S. Forest Service and Bureau of Land Management. By assuring ten year access to excess biomass in a goods for services arrangement, both wood conversion and power plant facility infrastructure development will benefit from this authority and the security it brings with it.

The second criteria, technology risk, is largely a non-issue in this case as burning wood for power has a 50+ year history. While the technology continues to evolve, it is primarily improvements in efficiency and emissions, with the underlying technology remaining constant. Likewise, the technology to thin cost

effectively while protecting and enhancing the environment is well proven, with individual entrepreneurs continuing to lower costs, increase production, expand range and soften the footprint.

The third criteria, project economics, is where a comprehensive energy bill can assist, at least on the biomass power plant side. In all cases, maximum use should be made of all thinned material. Any material used for higher uses such as building material, paper, chemicals or other wood products only improve the economics of the residual fuel. If raw material supply is stable over time, the infrastructure to produce the higher valued products will develop, as their markets are well developed and mature. To repeat, the more upstream diversion that occurs, the lower the cost of thinning and the lower the cost of the resulting fuel for biomass power.

Forest Health Subcommittee Chairman McInnis has indicated he will pursue the inclusion of a fuel transportation provision for such fuels as part of an energy bill, and that will be a major benefit to biomass power plant economics. Biomass plants need a combination of a strong stable revenue stream and low fuel cost to be viable, and Congressman McInnis' provision will allow remote fuels to arrive at the plant at a reasonable cost, allowing the plants to be more centrally located with respect to transmission. We sincerely hope that the authors of this Committee's piece of the energy bill will include this important provision.

On the revenue side, any energy bill should encourage states to provide opportunities for strong stable revenues from renewable projects, including biomass, by encouraging renewable direct access, renewable purchase requirements and/or emission reduction credits. Several Western states (AZ, CA, NM, NV) have recently mandated programs benefiting renewables, and an energy bill should continue this trend.

One program unique to biomass that is included in the President's budget and was included in both House and Senate versions of last years' energy bill is the change to the IRS Section 45 Biomass Tax Credit. The change in definition of biomass would allow projects such as those described here to qualify for the tax credit, and would make the credit available to both new and existing plants. Existing biomass plants, scattered throughout the West, are expected to play a key role in support of thinning. Plants previously closed in such places as Afton, WY, Emmett, Idaho and Kinzua, OR. could potentially be reopened based on this legislation. Passage of these changes, spelled out in congressman Herger's HR804, would be the single most important thing an energy bill could do to preserve and expand the biomass power infrastructure in support of these needed forest health initiatives. Though Congressman Herger's bill will be heard in the House Ways & Means Committee, its relationship to the work of this committee is direct and important, and we would hope that each of you will choose to cosponsor HR804.

As I stated previously, an energy bill can be the catalyst that sets in motion the investment of perhaps $30-50 billion in private capital in an infrastructure to convert the excess biomass off perhaps 5 million acres per year of unhealthy, fire prone Western public forests to products and energy. Based on our experience, an acre will produce approximately 30 tons of fuel and 2-5,000 board feet of small logs. This 150 million tons annually of excess unused material could fuel 10,000 mw of biomass power, more than doubling the current output of the industry, but still only a small percentage of western power needs. And not insignificantly, instead of costing the Federal Treasury $80 billion to thin 100 million acres over the next two decades, the cost may well be reduced to zero. If there was ever a program where environment, energy and economics are all positive, this is it.

The situation that the U.S. finds itself in today is truly unique. We have a need for a massive effort to restore our nation's public forests to health to prevent repeats, or worse, of the 7 million acres that burned in 2002. And we have a need for an environmentally sound program to develop secure domestic renewable sources of energy to prevent further increases in our dependence on foreign sources of energy. By marrying these two efforts as described above, we can accomplish both with only modest incentives provided as part of a comprehensive energy bill, and at only a fraction of the cost of conducting either effort separately. And, as added benefits, catastrophic wildfires will be reduced, wildlife habitat will be enhanced, watersheds saved, air quality improved, rural economies strengthened and forest lands returned to health typically at hopefully no cost, all while protecting the largest and best of the forest.

The membership of the USA Biomass Power Producers Alliance stands ready to assist you in this effort. Thank you.